

LET'S GROW MORE

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DATA SCIENCE INTERN

Task - Image to pencil sketch using python

Description of Task

We need to read the image in RGB format and then convert it to a grayscale image. This will turn an image into a classic black and white photo.Then the next thing to do is invert grayscale image also called negative image. This will be our inverted grayscale image inversion can be used to enhance details.Then we can finally create the pencil sketch by mixing the grayscale image with the inverted blurry image.This can be done by Dividing the grayscale image by the inverted blurry image. since image are just arrays. we can easily do this programmatically using the divide function from the cv2 library in python.

Importing Libraries

In [1]: import cv2

Reading Image

In [2]: image = cv2.imread("D:\da\cartoon.jpg")

Displaying image

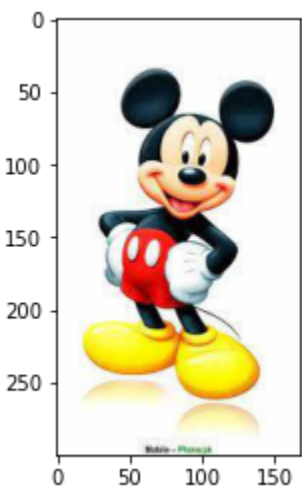
In [3]: cv2.imshow("D:\da\cartoon",image)
cv2.waitKey(0)

Out[3]: -1

Read the image in RGB format

In [4]: import matplotlib.pyplot as mat
%matplotlib inline
img = cv2.cvtColor(image,cv2.COLOR_BGR2RGB)
mat.imshow(img)

Out[4]: <matplotlib.image.AxesImage at 0x186de58f070>



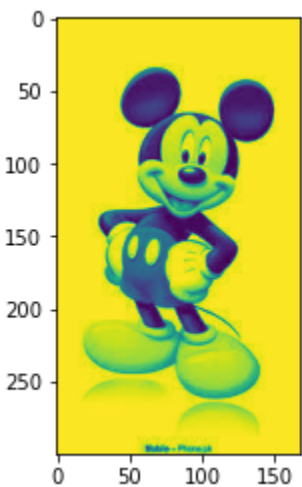
Converting the image to grayscale

In [5]: grayScale = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)
grayScale

Out[5]: array([[254, 254, 254, ..., 254, 254, 254],
 [254, 254, 254, ..., 254, 254, 254],
 [254, 254, 254, ..., 254, 254, 254],
 ...,
 [254, 254, 254, ..., 254, 254, 254],
 [254, 254, 254, ..., 254, 254, 254],
 [254, 254, 254, ..., 254, 254, 254]], dtype=uint8)

In [6]: mat.imshow(grayScale)

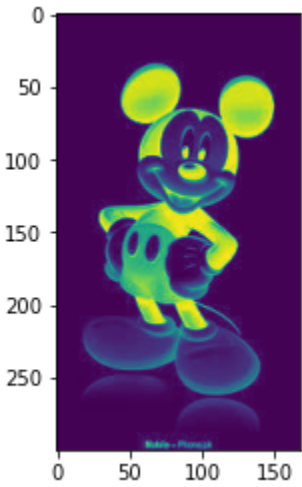
Out[6]: <matplotlib.image.AxesImage at 0x186decf9af0>



Invert Image

In [7]: invertImage = 255-grayScale
mat.imshow(invertImage)

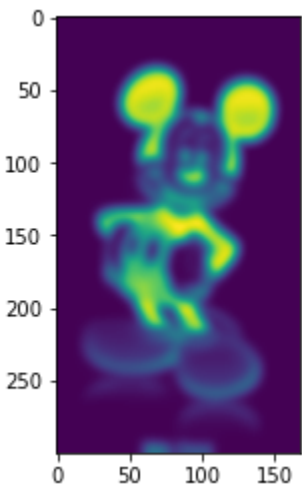
Out[7]: <matplotlib.image.AxesImage at 0x186ded70430>



Blurring the image using Gaussian Function

In [8]: blurr = cv2.GaussianBlur(invertImage,(21,21),0)
mat.imshow(blurr)

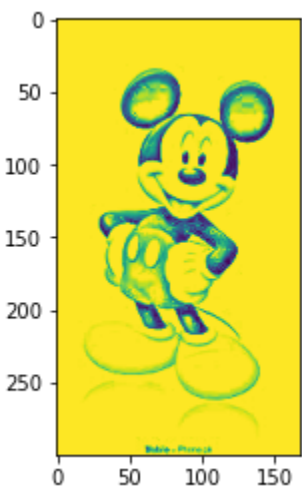
Out[8]: <matplotlib.image.AxesImage at 0x186dedbffd0>



Convert blurred image into sketch

In [9]: invertedBlur = 255- blurr
Sketch = cv2.divide(grayScale,invertedBlur, scale=256.0)
mat.imshow(Sketch)

Out[9]: <matplotlib.image.AxesImage at 0x186dee1bd90>



RESULT

In [10]: cv2.imshow("original Image",image)
cv2.imshow("pencil sketch",Sketch)
cv2.waitKey(0)

Out[10]: 101

THANK YOU